



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB2000-0052

April 13, 2000

Mr. Fred Patron
Federal Highway Administration
The Equitable Center, Suite 100
530 Center Street NE
Salem, OR 97301

Re: Biological Opinion for the John Day River (Coles) Bridge Repair Project
COE ID: 99-01050; ODSL: GA-18723

Dear Mr. Patron:

The National Marine Fisheries Service (NMFS) has enclosed the Biological Opinion (Opinion) that addresses your proposed project to repair the Coles Bridge along US 26 over the John Day River in Grant County, Oregon. NMFS received the Biological Assessment (BA) and request for consultation on March 7, 2000. The Federal Highway Administration (FHWA) is funding the proposed repair and is the lead action agency. Oregon Department of Transportation (ODOT) is the designer for the project, and will administer the construction contract.

This Opinion considers the potential effects of the project on the Middle Columbia River steelhead (*Oncorhynchus mykiss*) which occur in the proposed project area. Middle Columbia River steelhead were listed as threatened under the Endangered Species Act on March 25, 1999 (64 FR 14517), and critical habitat has been designated (65 FR 7764). This opinion constitutes formal consultation for the Middle Columbia River steelhead. The NMFS concludes that the proposed action is not likely to jeopardize the subject species or destroy or adversely modify critical habitat. Included in the enclosed Opinion is an incidental take statement with terms and conditions to minimize the take of the subject species.



If you have any questions regarding this letter, please contact Nancy Munn in the Oregon State Branch Office at (503) 231-6269.

Sincerely,



William Stelle, Jr.
Regional Administrator

cc: Rose Owens - ODOT
 Randy Floyd - ODOT (attachment)
 Chuck Howe - ODOT (attachment)
 Julie Bunnell - ODOT (attachment)
 Ken Eddy - ODOT Project Team Leader
 Art Martin - ODFW (attachment)
 Army Corps of Engineers (attachment)
 Oregon Division of State Lands

Endangered Species Act - Section 7
Consultation

BIOLOGICAL OPINION

John Day River (Coles) Bridge Repair
US Highway 26
Grant County

Agency: Federal Highway Administration

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: April 13, 2000

Refer to: OSB2000-0052

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I. BACKGROUND

On March 7, 2000, the National Marine Fisheries Service (NMFS) received a Biological Assessment (BA) and request from the Federal Highway Administration (FHWA) for Endangered Species Act (ESA) section 7 formal consultation for a bridge repair on the mainstem John Day River on US-26, about 6 miles west of the town of John Day in Grant County, Oregon. The bridge is called the Coles Bridge. The FHWA is funding the proposed repair, and is the lead agency for the project. Oregon Department of Transportation (ODOT) has designed the project and will administer the construction contract. This Biological Opinion (Opinion) is based on the information presented in the BA and the result of the consultation process.

FHWA/ODOT has determined that the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) may occur within the project area. The MCR steelhead was listed under the ESA on March 25, 1999 (64 FR 14517). The proposed project is within MCR steelhead critical habitat, which was designated February 16, 2000 (65 FR 7764).

FWHA/ODOT is proposing to repair the existing bridge by repairing scour damage to the pier footings on the Coles Bridge. The project requires moving machinery down the river bank and into the river next to the bridge, excavating river bed material from around bridge pier footings, and placing riprap in the scour holes around the concrete pier footings.

The effects determination was made using the methods described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). FWHA/ ODOT determined that the proposed action was likely to adversely affect the MCR steelhead.

This Opinion reflects the results of the consultation process. The consultation process involved a site visit in the fall of 1999, and correspondence and communications to obtain additional information and clarify the BA. As appropriate, modifications to the proposal to reduce impacts to the indicated species were discussed and incorporated into the proposed action. This included stockpiling excavated riverbed material and placing it over the riprap placed at the bridge footings.

The objective of this Opinion is to determine whether the action to repair the Coles Bridge is likely to jeopardize the continued existence of the MCR steelhead or destroy or adversely modify its critical habitat.

II. PROPOSED ACTION

The FHWA/ODOT proposes to repair the existing bridge by repairing scour damage to the pier footings on the Coles Bridge. The existing bridge is a concrete structure that is 183 feet long and 26 feet wide. The bridge is supported by four bents, two of which are located on each side of the flowing

channel. Each bent consists of four square concrete pillars, supported on concrete footings that were originally excavated on the bottom of the river. At the bridge, the river is approximately 60 feet wide.

The repair will require moving equipment into the flowing channel from the river bank on the northeast corner of the bridge, excavation of trenches around the pier footing on both sides of the river, and filling of the excavated trenches with riprap. Following placement of riprap around the pier footings, river rock will be placed over the riprap to restore rearing habitat under the bridge. The river rock will be at the existing grade of the channel after placement.

Approximately 405 cubic yards of existing material will be excavated from around the pier footings, mostly on the south side of the channel. The trenches will be excavated down to the tip of the existing pier footings and extend 6 feet upstream and downstream of the end piers. The excavator will need to work from two locations, one on each side of the channel. Most excavation will take place on the east side of the river. Water levels on the east side of the river are likely to be low during the Oregon Department of Fish and Wildlife (ODFW) in-water work period (July 15 to August 31). It is possible that the excavation on the east end of the bridge can be done with the excavator parked on the gravel bar, completely out of the wetted part of the river channel. The excavator will be diapiered during all work within the two-year floodplain of the John Day River. This will minimize the potential for leakages of hazardous substances from reaching the river.

Excavated riverbed material will be stockpiled on the northeast bank above the two-year floodplain. On the west side, the excavator can dump the excavated material by rotating in place. On the east side, the excavator may need to move to dump the material.

The trenches will be filled with an estimated 443 cubic yards of Class 350 riprap to 6 feet above the top of the footings. On the west side, the riprap would extend 6 feet (horizontal distance) from the piers on all sides and then taper down to the bottom of the channel on a 1.5:1 slope. On the east side, the riprap would extend 5 feet out toward the center of the channel and 3 feet toward the river bank. The slope facing the channel would taper to the bottom of the channel on a 1.5:1 slope. The riprap next to the piers will be covered with stockpiled river bed material to restore a natural stream bottom.

In addition, a 5 foot wide strip of the embankment under all four corners of the bridge will be covered with about 23.5 cubic yards of Class 50 riprap. These strips will extend 3 feet upstream and downstream of the bridge. This rock will be added to the existing rock currently under the bridge. The rock will be placed within the 2-year floodplain, but can probably be placed in the dry.

Staging

Access to the river would be off the highway (US-26) at the northeast corner of the bridge, and would cut through the earth and rock berm along the fence. This will be the only entry into the river that is allowed. It is approximately 33 feet north of the northeast corner of the bridge. Erosion control

measures (e.g. silt fences, haybales, etc.) will be in place to minimize runoff of sediment from the ground disturbing activities. Some riparian vegetation will be removed to build this access. Matting will be placed along the access road from the highway to the bank to minimize erosion.

Riprap will be trucked down the access road, and then transferred by the excavator one load at a time. Riprap will not be stockpiled on the river bank or within the active channel.

Erosion Control

Standard erosion control methods will be used to minimize the amount of surface erosion into the river. In addition, sediment containment will be necessary during the period of in-water work. Cofferdams or similar structure will be used to isolate the work area from the actively flowing stream. The contractor will be required to implement whatever measures are necessary to insure that access of equipment into the flowing stream and operation of that equipment in the stream will not cause compaction or displacement of the substrate.

Mitigation

FHWA/ODOT will pursue mitigation at a 1:1 ratio for degradation or removal of streambed, substrate, and streambank habitats. The replacement ratio will be 1.5:1 ratio for impacts to riparian vegetation. Approximately 50 black cottonwoods and 100 willows (rooted stock) will be planted during November 2000. They will be planted within the five-year floodplain elevation in areas where riparian vegetation has been removed or disturbed. Plantings will be established on 3-foot centers, allowing overlap of 3 feet into undisturbed area. The net effect of the action is an improved area of riparian vegetation over the long term.

III. BIOLOGICAL INFORMATION AND CRITICAL HABITAT

The MCR steelhead Evolutionarily Significant Unit (ESU) was listed as threatened under the ESA by the NMFS on March 25, 1999 (64 FR 14517). Biological information concerning the MCR steelhead may be found in Busby et al. (1995, 1996). Critical habitat was designated for the MCR steelhead on February 16, 2000 (65 FR 7764). Critical habitat for MCR steelhead includes the major Columbia River tributaries known to support this ESU including the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, streambank stability, input of large woody debris or organic matter, and others.

IV. EVALUATING PROPOSED ACTIONS

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of: (1) defining the biological requirements and current status of the listed species; and (2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NMFS' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for juvenile and adult migration, and rearing of the MCR steelhead under the existing environmental baseline.

A. Biological Requirements

The first step in the methods the NMFS uses for applying the ESA section 7(a)(2) to listed steelhead is to define the species' biological requirements that are most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess to the current status of the listed species, NMFS starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful adult and juvenile migration, and rearing. MCR steelhead spawning does not occur within or adjacent to the project area. The current status of the MCR steelhead, based upon their risk of extinction, has not significantly improved since the species was listed and, in some cases, their status may have worsened. The serious declines in abundance in the John Day River Basin are especially troublesome, because the John Day River has supported the largest populations of naturally spawning summer steelhead in the MCR ESU. The general pattern in abundance for these populations was a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s. In recent years, all populations have declined to lows that are similar to counts observed in the late 1970s.

B. Environmental Baseline

The current range-wide status of the identified ESU may be found in Busby et al. (1995, 1996). The identified action will occur within the range of MCR steelhead. The defined action area is the area that is directly and indirectly affected by the action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where actions described in this opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities include the immediate portions of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and riparian habitat of the John Day River extending 50 feet upstream of the area of disturbance, and extending 100 feet downstream of the area of disturbance around Coles Bridge. Other areas of the John Day River watershed are not expected to be directly or indirectly impacted.

The bridge is located across the John Day River, about 6 miles west of John Day in Grant County. Stream flows in this reach peak during spring runoff, and are lowest in August, September, and October. During summer low flows, water temperatures rise to levels exceeding the lethal limit for salmon and steelhead. Major impacts in the watershed include grazing, logging, roads, stream channelization, flood, irrigation, mining and agriculture. Riparian habitat degradation is considered the most serious habitat problem in the John Day River Basin. This reach of the river is on the Oregon Department of Environmental Quality's (ODEQ) list of water quality limited segments (Clean Water Act §303(d)) for dissolved oxygen, flow modification, summer temperature, and fecal coliforms. The

major habitat constraints for summer steelhead in this area are streambank degradation, high temperatures, low flow levels from dewatering, and sedimentation.

Concern over these issues has led to changes in the grazing strategy which have produced improvements in many riparian areas within the subbasin. When livestock grazing is excluded, cottonwood and willows established more rapidly, resulting in rapid increases in the density, cover, and height of willows and cottonwoods, and also with herbaceous plants such as sedges and rushes.

Many habitat restoration projects have been planned or are being implemented in the basin. Project objectives are to increase in-stream river flows through a combination of irrigation efficiency measures and reduced bank instability, sedimentation, and bedload movement, thereby improving water quality, reducing or eliminating salmonid migration delays from passage impediments, improve riparian condition and implement an annual monitoring program.

Within the action area, the river is fenced off from adjacent private pastureland and dwellings. The river bank has been diked on the northeast quadrant. Riparian vegetation is sparse and consists mostly of reed canarygrass. The river banks are vegetated with willows on the northwest, southwest, and southeast corners of the bridge, and with rose and Russian elms on the northeast corner. The riparian shrubs provide little shading of the river near the bridge.

Near the Coles Bridge, summer steelhead, spring chinook, and redband trout occupy the mainstem John Day River. Steelhead rearing takes place all year, and outmigrating smolts pass the bridge in the spring. During the in-water work period of July 15th to August 31st, no adult fish are present in the river near the bridge. All outmigrating smolts have gone downstream during the period, but rearing juvenile steelhead are present.

Based on the best available information on the current status of MCR steelhead range-wide; the population status, trends, and genetics; and the poor environmental baseline conditions within the action area (as described in the BA), NMFS concludes that the biological requirements of the identified ESU within the action area are not currently being met. Numbers of MCR steelhead are substantially below historic numbers. Long-term trends are decreasing. Recent droughts and change in ocean productivity have probably reduced run sizes. River basins display degraded habitat conditions resulting from agricultural practices, water diversions, road building, mining, forest management activities, and flooding. Use of the NMFS Matrix of Pathways and Indicators (NMFS 1996) identified the following habitat indicators as either at risk or not properly functioning within the action area: Summer water temperatures, turbidity/sediment, chemical contamination/nutrients, large woody debris, pool frequency and quality, off-channel habitat, refugia, streambank condition, and floodplain connectivity, flow/hydrology, and watershed conditions. Actions that do not maintain or restore properly functioning aquatic habitat conditions have the potential to jeopardize the continued existence of MCR steelhead.

V. ANALYSIS OF EFFECTS

A. Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of proposed actions are expressed in terms of the expected effect - restore, maintain, or degrade - on aquatic habitat factors in the project area.

The proposed action has the potential to cause the following impacts to threatened MCR steelhead or designated critical habitat:

1. In-water work will be needed to operate equipment to excavate the trenches around the two piers and place riprap in the trenches. This has the potential to directly harm any rearing steelhead present.
2. The in-water work has the potential to increase turbidity in the river. Larger juvenile and adult salmon appear to be little affected by ephemerally high concentrations of suspended sediments that occur during most storms and episodes of snow melt. However, other research demonstrates that feeding and territorial behavior can be disrupted by short-term exposure to turbid water. Localized increases of turbidity during in-water work will likely displace steelhead in the project area and disrupt normal behavior. The effects are expected to be temporary and localized.
3. The placement of riprap will displace natural riverbed substrate, and remove the existing pool habitat. The placement of the excavated riverbed materials on top of the riprap will ameliorate this part of this impact.
4. Approximately 20 trees and shrubs would be removed to facilitate the construction of the equipment access road to the river. Riparian vegetation removal will cause short-term bank instability, and some loss of riparian function (shade, secondary production, nutrient regulation, etc.) over the short term.
5. Staging activities may result in a spill of hazardous materials. In addition, operation of machinery within and near the river will increase the risk of a hazardous spill in the river.

The effects of these activities on MCR steelhead and aquatic habitat factors will be limited by utilizing construction methods and approaches that are included in project design and are intended to avoid or minimize impacts. These include:

1. All in-water work will be conducted during the ODFW in-water work period of July 15th to August 31st. Adult steelhead will not be migrating during that time period. Juvenile salmon may be rearing in the project area during the in-water work period. Any juveniles rearing in the project area have the potential to be displaced or killed during the in-water work.

- A containment system to separate the work area from the flowing stream will minimize the impacts, but there is still a potential for lethal and non-lethal impacts. ODFW will remove any trapped fish from the containment area prior to pumping or construction activities.
2. The containment system will also help to minimize the amount of sediment entrained in the river during the in-water construction period. Sediment-laden water from isolated work areas will be pumped to an upland area where it will be filtered through a silt fence, bioswale, or settling basin designed to filter sediment out of the water before the water reaches the river.
 3. Any equipment that is to come in contact with the flowing channel will be inspected daily for leaks prior to entering the flowing stream. External oil, grease, and mud will be removed from equipment using steam cleaning. The equipment will be inspected by the project inspector prior to each entry into the flowing stream. Untreated wash and rinse water must be adequately treated prior to discharge into the stream.
 4. An erosion control plan will be implemented that includes silt fences, sediment filters and routine monitoring. Proper implementation of erosion and sediment controls should be adequate to minimize sediment inputs into the river until vegetation regrowth occurs. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning.
 5. All vegetation removed will be replaced at a 1.5:1 ratio with native plant species. Approximately 50 black cottonwoods and 100 willows (rooted stock) will be planted within the action area during November 2000. The net effect of the action is an improved riparian area over the long term.
 6. Hazardous materials, including fuel, will not be stored or transferred within 165 feet of the two-year floodplain of the John Day River. No staging areas or parking areas will occur within 165 feet of the two-year floodplain. This will reduce the likelihood of a spilled toxic substance reaching the river. Spill containment booms will be maintained on-site at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.
 7. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.

For the proposed action, the NMFS expects that the effects of the proposed project will tend to maintain each of the habitat elements over the long term, greater than one year. However, in the short term, a temporary increase in sediment entrainment and turbidity, and disturbance of riparian and in-stream habitat is expected. Fish may be killed or temporarily displaced during the in-water work (construction of the trenches and placement of riprap). The potential net effect from the proposed action, including proposed plantings, is expected to be the maintenance and restoration of functional steelhead habitat conditions.

B. Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Critical habitat for MCR steelhead consists of all waterways below naturally impassable barriers including the project area. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.

The proposed actions will affect critical habitat. In the short term, a temporary increase of sediments and turbidity and disturbance of riparian and in-stream habitat is expected. In the long term, no net loss of habitat will occur. Consequently, NMFS does not expect that the net effect of this action will diminish the long-term value of the habitat for survival of MCR steelhead.

C. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The action area is defined as the streambed and riparian habitat of the John Day River extending 50 feet upstream of the area of disturbance, and extending 100 feet downstream of the area of disturbance around the piers. A wide variety of actions occur within the watersheds defined within the Opinion. NMFS is not aware of any significant change in non-Federal activities that are reasonably certain to occur within the action area. NMFS assumes that future private and State actions will continue at similar intensities as in recent years. Future FHWA/ODOT transportation projects are planned in the John Day River watershed. Each of these projects will be reviewed through separate section 7 consultations and are not considered cumulative effects.

VI. CONCLUSION

NMFS has determined, based on the available information, that the proposed action is expected to maintain properly functioning stream habitat conditions within the action area over the long term. As such, the proposed action covered in this Opinion is not likely to jeopardize the continued existence of MCR steelhead. NMFS used the best available scientific and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to sediment impacts, in-water construction, and habitat loss. These effects will be mitigated over the long-term through the implementation of

proposed plantings and restoration of native streambed materials over the excavated site. Direct mortality of juvenile steelhead may occur during the in-water work period of project activities.

VII. REINITIATION OF CONSULTATION

Consultation must be reinitiated if: The amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals effects of the action may affect listed species in a way not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16). To re-initiate consultation, ODOT must contact the Habitat Conservation Division (Oregon Branch Office) of NMFS.

VIII. REFERENCES

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion.

Busby, P., S. Grabowski, R. Iwamoto, C. Mahnken, G. Matthews, M. Schiewe, T. Wainwright, R. Waples, J. Williams, C. Wingert, and R. Reisenbichler. 1995. Review of the status of steelhead (*Oncorhynchus mykiss*) from Washington, Idaho, Oregon, and California under the U.S. Endangered Species Act. 102 p. plus 3 appendices.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Liehr, R.S. Waples, and I.V. Lagomarsino. 1995. Status review of west coast steelhead from Washington, Idaho, Oregon, and California

DEQ 1996. 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1996.
(www.deq.state.or.us/wq/303dlist/303dpage.htm).

DEQ 1998. Draft 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1998.
(www.deq.state.or.us/wq/303dlist/303dpage.htm).

DSL 1996. Essential Indigenous Salmonid Habitat, Designated Areas, (OAR 141-102-030). Oregon Division of State Lands. Portland, Or. 1996.

NMFS (National Marine Fisheries Service) 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon.

ODFW 1996. Database -- Salmonid Distribution and Habitat Utilization, Arc/Info GIS coverages.
Portland, Or. 1996. (rainbow.dfw.state.or.us/ftp/).

IX. INCIDENTAL TAKE STATEMENT

Sections 4 (d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

A. Amount or Extent of the Take

The NMFS anticipates that the action covered by this Opinion has more than a negligible likelihood of resulting in incidental take of MCR steelhead because of detrimental effects from increased sediment levels (non-lethal) and the potential for direct incidental take during in-water work (lethal and non-lethal). Effects of actions such as these are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on steelhead habitat or population levels. Therefore, even though NMFS expects some low level incidental take to occur due to the actions covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on the information in the biological assessment, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions covered by this Opinion. The extent of the take is limited to within the area of project disturbance, extending 100 feet downstream and 50 feet upstream of the area of disturbance around the piers.

B. Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimizing take of the above species. Minimizing the amount and extent of take is essential to avoid jeopardy to the listed species.

1. To minimize the amount and extent of incidental take from construction activities within the John Day River, measures shall be taken to limit the duration and extent of in-water work, and to time such work when the impacts to fish are minimized.
2. To minimize the amount and extent of incidental take from construction activities in or near the river, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance. The measures shall minimize the movement of soils and sediment both into and within the river, and will stabilize bare soil over both the short term and long term.
3. To minimize the amount and extent of take from loss of in-stream habitat and to minimize impacts to critical habitat, measures shall be taken to minimize impacts to riparian and in-stream habitat, or where impacts are unavoidable, to replace or restore lost riparian and in-stream function.
4. To ensure effectiveness of implementation of the reasonable and prudent measures, all erosion control measures shall be monitored and evaluated both during and following construction and meet criteria as described below in the terms and conditions.

C. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, FHWA/ODOT must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. Implementation of the terms and conditions within this Opinion will further reduce the risk of impacts to fish and the John Day River. These terms and conditions are non-discretionary.

1. In-water work:
 - a. Passage shall be provided for both adult and juvenile forms of all salmonid species throughout the construction period. FHWA/ODOT designs will ensure passage of fishes as per ORS 498.268 and ORS 509.605 (Oregon's fish passage guidance).
 - b. All work within the active channel of all anadromous fish-bearing systems, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within ODFW's in-water work period (July 15th to August 31st). Any extension of the in-water work period will first be approved by, and coordinated with, NMFS.

- c. All in-water work will be done within a cofferdam (made out of sandbags, sheet pilings, inflatable bags, etc.), or similar structure, to minimize the potential for sediment entrainment.
- d. Alteration or disturbance of stream banks and existing riparian vegetation will be minimized. Where bank work is necessary, bank protection material shall be placed to maintain normal waterway configuration.
- e. During ODOT project design, ODOT will work to minimize the amount of riprap used. Where riprap is necessary, only clean, non-erodible, upland angular rock of sufficient size for long-term armoring will be employed. In areas with riprap installation, large riprap (class 350 metric minimum) will be used preferentially within the 2-year floodplain of systems, where this riprap would come into contact with actively flowing water, and where using larger riprap would not constrict the size of the active channel (larger rock sizes create larger interstitial spaces for juvenile salmonids). Placement will be performed during the low water period, and will be done "in the dry" as much as possible.
- f. During excavation, native streambed materials will be stockpiled out of the two-year floodplain for later use. Once riprap has been placed in the trench, the native materials will be placed overtop of the riprap.

2. Erosion and Pollution Control

An Erosion Control Plan (ECP) will be prepared by ODOT or the contractor, and implemented by the Contractor. The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable water quality standards. The ECP shall be maintained on site and shall be available for review upon request.

- a. Erosion Control measures shall include (but not be limited to) the following:
 - i. The contractor will have the following on hand: 50 weed-free straw bales, 150 feet of unsupported silt fence, and 25 biobags. The purpose is to address unexpected rain events, or failure of other measures to contain sediment.
 - ii. Temporary plastic sheeting for immediate protection of unvegetated areas (where seeding/ mulching are not appropriate), in accordance with ODOT's standard specifications.
 - iii. Erosion control blankets or heavy duty matting (e.g., jute) may be used on steep unstable slopes in conjunction with seeding or prior to seeding.

- iv. Sills or barriers may be placed in drainage ditches along cut slopes and on steep grades to trap sediment and prevent scouring of the ditches. The barriers will be constructed from rock and straw bales.
 - v. Biobags, weed-free straw bales and loose straw may be used for temporary erosion control. Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work on exposed slopes.
- b. Effective erosion control measures shall be in-place at all times during the contract. Construction within the 5-year floodplain will not begin until all temporary erosion controls (e.g., straw bales, silt fences) are in-place, downslope of project activities within the riparian area. Erosion control structures will be maintained throughout the life of the contract.
- c. All temporarily-exposed areas will be seeded and mulched. Erosion control seeding and mulching, and placement of erosion control blankets and mats (if applicable) will be completed on all areas of bare soil within 7 days of exposure within 150 feet of waterways, wetlands or other sensitive areas, and in all areas during the wet season (after October 1). All other areas will be stabilized within 14 days of exposure. Efforts will be made to cover exposed areas as soon as possible after exposure.
- d. All erosion control devices will be inspected during construction to ensure that they are working adequately. Erosion control devices will be inspected daily during the rainy season, weekly during the dry season, monthly on inactive sites. Work crews will be mobilized to make immediate repairs to the erosion controls, or to install erosion controls during working and off-hours. Should a control measure not function effectively, the control measure will be immediately repaired or replaced. Additional erosion controls will be installed as necessary.
- e. If soil erosion and sediment resulting from construction activities is not effectively controlled, the engineer will limit the amount of disturbed area to that which can be adequately controlled.
- f. Sediment will be removed from sediment controls once it has reached 1/3 of the exposed height of the control. Whenever straw bales are used, they will be staked and dug into the ground 12 cm. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.
- g. Where feasible, sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters an aquatic resource area. Silt fences or other detention methods will be installed as close as possible to culvert outlets to reduce the amount of sediment entering aquatic systems.

- h. A supply of erosion control materials (e.g., straw bales and clean straw mulch) will be kept on hand to cover small sites that may become bare and to respond to sediment emergencies.
- i. All equipment that is used for in-stream work will be cleaned prior to entering the two-year floodplain. External oil and grease will be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into streams and rivers without adequate treatment.
- j. On cut slopes steeper than 1:2, a tackified seed mulch will be used so that the seed does not wash away before germination and rooting occurs. In steep locations, a hydro-mulch will be applied at 1.5 times the normal rate.
- k. Material removed during excavation shall only be placed in locations where it cannot enter sensitive aquatic habitat. Conservation of topsoil (removal, storage and reuse) will be employed.
- l. Measures will be taken to prevent construction debris from falling into any aquatic habitat. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.
- m. Project actions will follow all provisions of the Clean Water Act (40 CFR Subchapter D) and DEQ's provisions for maintenance of water quality standards not to be exceeded within the John Day River (OAR Chapter 340, Division 41). Toxic substances shall not be introduced above natural background levels in waters of the state in amounts which may be harmful to aquatic life. Any turbidity caused by this project shall not exceed DEQ water quality standards.
- n. The Contractor will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. The Contractor will be monitored by the ODOT Engineer to ensure compliance with this PCP. The PCP shall include the following:
 - i. A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for contractor's operations related to disposal sites, borrow pit operations, haul roads, equipment storage sites, fueling operations and staging areas.
 - ii. Methods for confining and removing and disposing of excess concrete, cement and other mortars. Also identify measures for equipment washout facilities.

- iii. A spill containment and control plan that includes: Notification procedures; specific containment and clean up measures which will be available on site; proposed methods for disposal of spilled materials; and employee training for spill containment.
 - iv. Measures to be used to reduce and recycle hazardous and non-hazardous waste generated from the project, including the following: the types of materials, estimated quantity, storage methods, and disposal methods.
 - v. The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractor's PCP.
- o. Areas for fuel storage, refueling and servicing of construction equipment and vehicles will be located at least 165 feet away from the 2-year floodplain. Overnight storage of wheeled vehicles must occur at least 165 feet away from the 2-year floodplain of the John Day River. Overnight storage of non-wheeled vehicles (e.g. crane, pile driver) is allowed within the 2-year floodplain during the in-water work window; however, to minimize the risk of fuel reaching the water, refueling of these vehicles must not occur after 1 pm.
- p. Hazmat booms will be installed in all aquatic systems where:
- i. Significant in-water work will occur, or where significant work occurs within the 5-year floodplain of the system, or where sediment/toxicant spills are possible.
 - ii. The aquatic system can support a boom setup (i.e. the creek is large enough, low-moderate gradient).
- q. Hazmat booms will be maintained on-site in locations where there is potential for a toxic spill into aquatic systems. "Diapering" of vehicles to catch any toxicants (oils, greases, brake fluid) will be mandated when the vehicles have any potential to contribute toxic materials into aquatic systems. This applies to the excavator for all work within the two-year floodplain of the John Day River.
- r. No surface application of nitrogen fertilizer will be used within 50 feet of any aquatic resource.

3. Riparian Habitat Protection Measures

- a. Boundaries of the clearing limits will be flagged by the project inspector. Ground will not be disturbed beyond the flagged boundary.

- b. Alteration of native vegetation will be minimized. Where possible, native vegetation will be clipped by hand so that roots are left intact. This will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g. Himalayan blackberry)
- c. Riparian understory and overstory vegetation removed will have a replacement rate of 1.5:1. Replacement will occur within the project vicinity where possible and within the watershed at a minimum. Any disturbed riparian areas must be planted with trees and shrubs, at a minimum. Approximately 50 black cottonwoods and 100 willows (rooted stock) will be planted within the action area during November 2000.

Monitoring

- a. Erosion control measures as described above in 2(d) shall be monitored.
- b. All significant riparian replant areas will be monitored to insure the following:
 - i. Finished grade slopes and elevations will perform the appropriate role for which they were designed.
 - ii. Plantings are performing correctly and have an adequate success rate.
- c. Failed plantings and structures will be replaced, if replacement would potentially succeed. If not, plantings at other appropriate locations will be done.
- d. A plant establishment period (3 year minimum) will be required for all riparian mitigation plantings. In extremely unstable or unproductive areas, ODOT may be released from the establishment period and develop a larger replanting area to compensate for this.
- e. By December 31 of the year following construction, FHWA/ODOT shall submit to NMFS (Oregon Branch) a monitoring report with the results of the monitoring required in terms and conditions (4(a) to 4(c) above).